



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,822	02/26/2004	Dong Jae You	10125/4116	7312

7590 04/03/2007
Brinks Hofer Gilson & Lione
Post Office Box 10395
Chicago, IL 60610

EXAMINER

SCHECHTER, ANDREW M

ART UNIT	PAPER NUMBER
----------	--------------

2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/701,822

Applicant(s)

YOU ET AL.

Examiner

Andrew Schechter

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21,23-45,47 and 48 is/are pending in the application.
- 4a) Of the above claim(s) 7-10,14-21,29,30,34-42 and 45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,11,12,23-28,31-33,43,44,47 and 48 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19 January 2007 has been entered.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Response to Arguments

3. Applicant's arguments filed 19 January 2007 have been fully considered but they are not persuasive.

The applicant argues [pp. 8-9] that *Mashino's* "hardened part," including element 79 "a double-sided tape which is typically opaque," is opaque, and this contradicts the recited limitation that light passes through the optical sheet. This is not persuasive. Even assuming it is opaque, this does not contradict the recited claim limitations: there would still be an optical sheet through which light passes (in the non-hardened region),

and the optical sheet would still have a hardened part (through which light happens not pass).

The applicant has added new claim 48 reciting that the hardened part is integral to the optical sheet. This distinguishes over the *Mashino* reference, so the new claim is not rejected in view of *Mashino*.

The applicant has amended claims 1 and 23, reciting that the hardened part has a longitudinal axis spaced a distance from a nearest edge of the optical sheet disposed parallel to the longitudinal axis. The applicant argues [p. 9] that this distinguishes over the *Jang* and *Mashino* references. This is not persuasive. First, the hardened part in the *Mashino* reference has such a parallel longitudinal axis, for instance the axis on the right of element 79 in Fig. 5, or the axis down the center of the element 79 in Fig. 5, which is spaced a distance from a nearest edge of the optical sheet. Second, the hardened part in *Jang* has an axis along the line where the optical sheet bends, and this bend occurs along a longitudinal axis spaced a distance from a nearest edge of the optical sheet disposed parallel to the longitudinal axis, just as in the present invention. The previous rejections are therefore repeated below, modified as necessary by the amendments to the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2871

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5, 11, 12, 23, 25-27, 43, 44, and 47 are rejected under 35

U.S.C. 102(b) as being anticipated by *Mashino et al.*, U.S. Patent No. 5,886,759.

Mashino discloses [see Figs. 1 and 5, for instance] a display comprising a light source [36], a display panel [62] having a display region, and at least one optical sheet [39] through which light from the light source passes and having region most proximate to the light source with a hardened part [the sandwich on the left in Fig. 5, from the light guide 37 to the reflector sheet 70 and everything in-between] that substantially prevents heat from the light source from being transferred to a display region of the at least one optical sheet corresponding to the display region of the display panel [apart from shielding light, the sandwich also acts as a heat sink to the light guide and the reflector sheet, thereby keeping the optical sheet to its right relatively cool, compared to if the hardened part was absent, thus substantially preventing heat from being transferred]; wherein the hardened part has a longitudinal axis [either along the center of hardened part or along the right edge of it in Fig. 5, for instance] spaced a distance from a nearest edge of the optical sheet disposed parallel to the longitudinal axis. Claim 1 is therefore anticipated.

Mashino also discloses the analogous method of manufacturing this display, so claim 23 is also anticipated.

There is a light guide panel [37] and the optical sheet is a diffusion sheet, so claims 2 and 25 are also anticipated. The optical sheet comprises a non-display region in which the hardened part is formed, so claim 3 is also anticipated. As seen in Fig. 1A, there is a non-display region of the display panel, and the hardened part overlaps it and overlaps only it, so claims 4, 5, 26, 27, 43, and 44 are also anticipated. The hardened part comprises a projecting part [79], so claim 11 is also anticipated. The projecting part projects towards the display panel, so claim 12 is also anticipated. The hardened part is aligned in a direction of warping generated by the heat from the light source [parallel the edge of the light source, as discussed under 35 USC 112], so claim 47 is also anticipated.

6. Claims 1, 2, 11, 12, 23-25, 31-33, 47, and 48 are rejected under 35 U.S.C. 102(e) as being anticipated by *Jang et al.*, U.S. Patent No. 6,891,580.

[The applied reference has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.]

Jang discloses [see Fig. 4, for instance] a display comprising a light source [220], a display panel [10], an optical sheet [260, 270, 280] through which light from the light source passes and having a region most proximate to the light source with a hardened

part [see below] that substantially prevents heat from the light source from being transferred [see below] to a display region of the optical sheet corresponding to the display region of the display panel.

Jang does not explicitly refer to the bent portion shown in Fig. 4 as a “hardened part”. However, it is bent which requires stress in the sheet, and according to the present specification [see paragraph 0072 of the specification, for instance], the stress involved in bending the sheets inherently causes part of it to be hardened [the amount of hardening will vary, presumably related to the amount of stress in bending]. Thus, the bent portion being, to at least a certain extent, a “hardened part” is inherent. Similarly, the bent portion / hardened part increases the thermal resistance [again an inherent feature discussed in the present specification], so it is inherent that *Jang*’s device satisfies the limitation that it substantially prevents [at least some] heat from being transferred. [The examiner notes that an argument that these features are not inherent in *Jang* but depend on, for instance, the specific bending process, would raise the issue of whether the present specification enables the claimed invention to be made and used by one of ordinary skill under 35 USC 112, first paragraph.] The hardened part has a longitudinal axis [along the line where the bend occurs] spaced a distance from a nearest edge of the optical sheet disposed parallel to the longitudinal axis. Claim 1 is therefore anticipated.

Jang also discloses the analogous method of manufacturing this display, so claim 23 is also anticipated.

There is a light guide panel [240] and the optical sheet comprises a diffusion sheet [260], so claims 2 and 25 are also anticipated. The hardened part comprises a projecting part, so claim 11 is also anticipated. The projecting part projects towards the display panel, so claim 12 is also anticipated. The method comprises forming the hardened part in the optical sheet, so claim 24 is also anticipated. The optical sheet contained the hardened part having a projecting portion that projects towards the display panel, so claim 31 is also anticipated. The method comprises forming the projecting portion in the optical sheet, so claim 32 is also anticipated. The projecting portion comprises a convex part [the hardened part is at the bend, and the bend is convex when viewed from above], so claim 33 is also anticipated. The hardened part is aligned in a direction of warping generated by the heat from the light source [parallel the edge of the light source, as discussed in a previous action under 35 USC 112], so claim 47 is also anticipated. The hardened part is integral to the optical sheet, so claim 48 is also anticipated.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2871

8. Claims 6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mashino et al.*, U.S. Patent No. 5,886,759 in view of *Jeong et al.*, U.S. Patent No. 6,595,651.

Mashino does not disclose the additional limitation that the hardened part is formed on opposing sides of the optical sheet. *Mashino* discloses a single lamp and a single hardened part. Having a single lamp and having two opposing lamps are art-recognized equivalents, as evidenced by *Jeong* [compare Figs. 6 and 11, for instance]. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the device of *Mashino* with two opposing lamps [as shown in *Jeong*'s Fig. 11], motivated by the art-recognized equivalence of doing so. The device would then have two hardened portions, one adjacent to each lamp [*Mashino* teaches the hardened portions are principally used to prevent light leakage, so each lamp would have one], formed on opposing sides, so claims 6 and 28 are therefore unpatentable.

Allowable Subject Matter

9. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose the device of claim 13, in particular the additional limitation that height of the projecting part is about 0.15 mm to about 0.2 mm. Claim 13 would therefore be allowable if rewritten appropriately.

Election/Restrictions

11. Claims 7-10, 14-21, 29, 30, 34-42, and 45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 3 January 2006.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (571) 272-2302. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Andrew Schechter
Primary Examiner
Technology Center 2800
31 March 2007